Chapter 5.0 Environmental Setting, Impacts, and Mitigation Measures

5.1 Introduction To The Analysis

5.1.1 Introduction

Sections 5.2 through 5.13 in this EIR/EA provide an integrated presentation of the environmental setting, environmental impacts, and proposed mitigation measures for the following environmental issue areas:

- Land Use, Zoning, and Adopted Policies (5.2)
- Geology and Soils (5.3)
- Transportation and Circulation (5.4)
- Air Quality (5.5)
- Noise and Vibration (5.6)
- Biological Resources (5.7)
- Visual Resources (5.8)
- Socioeconomics (5.9)
- Cultural Resources (5.10)
- Hazardous Materials (5.11)
- Water Quality (5.12)
- Drainage (5.13)

Potential effects of implementing the proposed project, including cumulative effects, are identified along with mitigation measures recommended to lessen or reduce identified impacts. In cases where no mitigation is available, this fact is noted.

The setting section describes the environment in the project and study areas "as it exists before the commencement of the project." The setting is presented from site, local, subregional and/or regional perspectives, as appropriate to each environmental topic. The effects of the project are defined as changes to the environmental setting that are attributable to the project.

Impacts are identified and determined to be potentially significant, significant, cumulatively significant, significant unavoidable, less than significant, or beneficial. A summary of cumulative impacts is provided in Chapter 7.0.

A significant impact is defined as "...a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project..." For each category of physical condition evaluated in this EIR, criteria for significance have been developed based on factual or scientific information; regulatory standards of local, state, and federal agencies; and goals, objectives, and policies identified in the El Dorado County General Plan.

Mitigation measures identified in this report are characterized in one of three categories: 1) measures necessary to reduce the identified impact below a level of significance; 2) measures recommended to reduce the magnitude of a significant impact, but not below a level of significance; and 3) measures recommended to reduce the magnitude of a less than significant impact. Where implementation of more than one mitigation measure is needed to reduce an impact below a level of significance, this fact is noted.

5.1.2 Cumulative Analysis

The cumulative impact analysis contained within this EIR/EA consists of impacts caused as a result of the combination of the project evaluated in this document together with other projects causing related impacts. Therefore the basis for the cumulative impact analysis within this document is the proposed interchange together with other transportation related improvements within the project vicinity. The roadway network surrounding the project site is assumed to remain the same for Cumulative Conditions as that which currently exists for Existing Conditions. Caltrans currently has no programmed improvement for US-50 for Cumulative Conditions, although there are currently discussions to either provide an HOV lane along the freeway, and/or 6 standard lanes along the freeway. Within this analysis, it is assumed that US-50 will remain a 4-lane facility.

The cumulative analysis also assumes growth for the region that will add traffic to the roadway network. Cumulative traffic volumes were established based on the El Dorado County traffic model as established for the 1996 El Dorado County General Plan. The model volumes are based on weekday PM peak hour conditions, and utilize Year 2022 as the future horizon year. Caltrans has established that the Year 2025 should be utilized to analyze Cumulative Conditions for this study. Cumulative volumes were initially established for year 2022 conditions, then factored up to year 2025 conditions through a straight line extrapolation of volumes.

Highway 50 volumes from the El Dorado County traffic model for 2022 conditions were very suspect. An analysis of PM peak hour volumes for 2022 conditions for US-50 shows that there was a loss of 850 vehicles from US-50 west of East Shingle Springs Drive to east of East Shingle Springs Drive. Since the model shows only 383 vehicles along East Shingle

Springs Drive south of US-50 (and volumes north of US-50 would continue to be very low and negligible), there was an obvious error in the model. El Dorado County has recognized this flaw and is in the process of correcting the model.

To establish the general integrity of volumes from the model, we compared existing AM and PM peak hour volumes which were collected by David Evans and Associates, Inc. for Highway 50, East Shingle Springs Drive, and the Highway 50/East Shingle Springs Drive freeway ramps to forecasted volumes from the model. Focusing on the PM peak hour, it is noted that Highway 50 west of the East Shingle Springs Drive interchange are projected to experience an annual growth rate between 1.7-4.3%. However, Highway 50 east of the interchange is projected to increase only 0.7-0.9% per year. This helped to confirm that forecasted Highway 50 volumes east of the interchange are very circumspect, and likely too low. To address this error, we increased the volume obtained from the model for Highway 50 east of the interchange. This adjustment was made by establishing reasonable cumulative ramp volumes along Highway 50/East Shingle Springs Drive freeway ramps for cumulative conditions based on both existing peak hour volumes, and projected growth as shown in the model. These ramp volumes were then added and subtracted from Highway 50 volumes west of the Highway 50/East Shingle Springs Drive interchange to establish Highway 50 volumes east of the Highway 50 to Shingle Springs Drive interchange.

5.1.3 Indirect Impacts

Closely related to cumulative impacts are indirect impacts. As defined by NEPA and CEQA, "indirect…effects…are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect…effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems" (CEQA Guidelines Section 15358 (2)). See 40 CFR § 1508.8 (b). For purposes of this EIR/EA, Indirect Effects includes the development of the proposed hotel and casino on the Rancheria. If constructed, the proposed interchange (direct subject of this EIR/EA) will allow free and open access to the Rancheria thereby allowing the opportunity for commercial development. The foreseeable consequence of interchange construction is the construction of the hotel and casino on the Rancheria. Chapter 9 of this EIR/EA addresses the indirect impacts of the interchange project.